Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-210

Space Based Infrared System High (SBIRS High)

As of FY 2017 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President’s Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Space Based Infrared System High (SBIRS High)

DoD Component

Air Force

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References

Baseline (GEO 1-4, HEO 1-2, and Ground)

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 19, 1998

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated February 27, 2013

Block Buy (GEO 5-6)

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated September 4, 2012

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated February 27, 2013

Mission and Description

The Space Based Infrared System High (SBIRS High) program is intended to satisfy key requirements delineated in the SBIRS ORD dated August 15, 1996, with Annex 1 dated July 17, 1998, within the available budget and schedule. SBIRS High is an integrated system consisting of multiple space and ground elements, with incremental deployment phasing, simultaneously satisfying requirements in the following mission areas: Missile Warning, Missile Defense, Technical Intelligence and Battlespace Awareness. The constellation architecture for SBIRS High includes Highly Elliptical Orbit (HEO) sensors and Geosynchronous Earth Orbit (GEO) satellites, in addition to the following ground elements: a Continental United States-based Mission Control Station and Mission Control Station Backup, overseas Relay Ground Stations, Mobile Ground Stations, and associated communication links. The first increment of the SBIRS ground system was certified for operations in December 2001 and supports mission processing of the legacy Defense Support Program system satellites and fusion of HEO monotracks and other data. The SBIRS HEO system was certified for the Integrated Tactical Warning/Attack Assessment (ITW/AA) mission in November 2008 and technical intelligence mission in August 2009. The SBIRS GEO 1 and 2 systems were ITW/AA mission certified in August 2013 and December 2013, respectively.

The SBIRS High MDAP includes two subprograms: the Baseline subprogram, comprised of GEO satellites 1-4, HEO payloads 1-2 and associated ground elements; and the GEO 5-6 Satellites Replenishment Production "Block Buy" subprogram. HEO payloads 3 and 4 are not part of this MDAP, but are closely related, so programmatic information is included in this SAR.

Executive Summary

SBIRS Baseline (Geosynchronous Earth Orbit (GEO) 1-4, Highly Elliptical Orbit (HEO) 1-2, and Ground)

Pursuant to section 2432 of title 10, United States Code, this is the final SAR submission for the Baseline (GEO 1-4, HEO 1-2, and Ground) subprogram of the SBIRS High program, because the program is 90% or more expended.

SBIRS Baseline efforts have been focused on obtaining Operational Acceptance (OA) for a launch-capable Block 10.3 ground segment. The Ground Block 10.3 baseline consolidates all SBIRS and Defense Support Program (DSP) operations at the Mission Control Station (MCS-2) at Buckley Air Force Base using a single software and hardware baseline. The contractor completed Capability Integration at MCS-2 on March 12, 2015. Capability Evaluation officially completed on December 23, 2015. A formal test on December 10-18, 2015 proved the Block 10.3 system has the ability to control the full constellation (GEO/HEO and DSP) of satellites. Block 10.3 entered Integrated Test & Evaluation on January 30, 2016. OA of Block 10.3 is projected for November 2016.

On August, 4, 2014, National Geospatial-Intelligence Agency declared the start of Technical Intelligence (TI) Initial Data for Evaluation phase for GEO 1-2 starer sensors, and Initial Data for Operations was declared on August 27, 2015. TI operational acceptance for Ground software Block 10.3 is projected for first Quarter FY 2017.

SBIRS GEO 3-4 Production

The SBIRS GEO 3 satellite completed Thermal Vacuum (TVAC) testing on March 21, 2015 and was placed into storage on July 14, 2015. If necessary, it can be brought out of storage and prepared for launch in six months. GEO 3 initial launch capability is September 30, 2017 as the fourth GEO flight.

SBIRS GEO 4 satellite integration and testing is proceeding as planned. Space Vehicle Baseline Testing was completed on May 15, 2015, acoustic testing and deployments were completed on July 6, 2015, and TVAC testing was completed on October 19, 2015. Final installations, software updates, and testing will be conducted through May 2016 when the satellite will be shipped to Cape Canaveral Air Force Station, FL. GEO 4 is scheduled to launch in July 2016 as the third GEO flight.

The SBIRS HEO 4 payload was successfully delivered by Northrop Grumman to the Host spacecraft manufacturer on May 13, 2015, on schedule and within budget.

SBIRS Survivable and Endurable Evolution (S2E2)

With the contract award of S2E2 Mobile Ground Terminal (SMGT) 4 on November 1, 2015 and a planned March 2016 award of SMGT 5, we will now have all of the main elements (five SMGTs) for the S2E2 Mobile Ground System.

SBIRS Block Buy (GEO 5-6)

The GEO 5-6 Tech Refresh (TR) Engineering Change Proposal was approved on June 10, 2015. This major contract modification converts the SBIRS-unique A2100 satellite bus to a modernized and modular A2100 TR bus. TR was proposed as cost-neutral; however, the contract ceiling was reduced by $85M to offset added government risk. Operations at Lockheed-Martin (LM) Newton, PA shut down on July 31, 2015 and remaining work transitioned to LM Denver, CO. The Independent Research and Development A2100TR bus Critical Design Review (CDR) completed on August 27, 2015. A delta Preliminary Design Review successfully completed on January 22, 2016, demonstrating that modernization (TR redesign) is making progress towards the next milestone, system CDR planned for early 2017. Additionally, the delta Integrated Baseline Review was completed on December 15, 2015. SBIRS GEO 5-6 initial Non-Recurring Engineering is 99% complete.

There are no significant software-related issues with this program at this time.

Threshold Breaches

Baseline (GEO 1-4, HEO 1-2, and Ground)

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

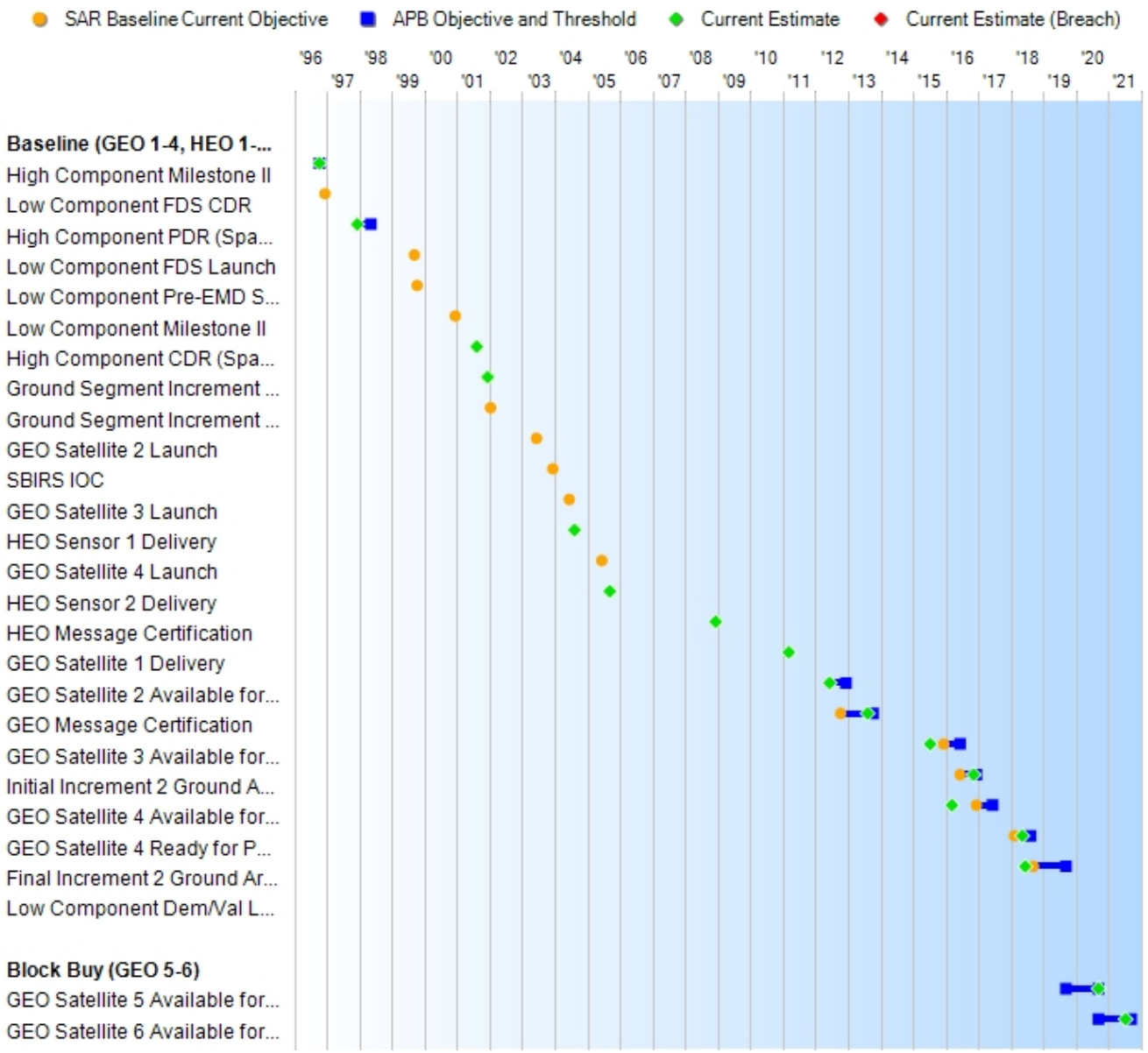
Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Block Buy (GEO 5-6)

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule


SAR Baseline Current Objective
APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21
Baseline (GEO 1-4, HEO 1-...
High Component Milestone II
Low Component FDS CDR
High Component PDR (Spa...
Low Component FDS Launch
Low Component Pre-EMD S...
Low Component Milestone II
High Component CDR (Spa...
Ground Segment Increment ...
Ground Segment Increment ...
GEO Satellite 2 Launch
SBIRS IOC
GEO Satellite 3 Launch
HEO Sensor 1 Delivery
GEO Satellite 4 Launch
HEO Sensor 2 Delivery
HEO Message Certification
GEO Satellite 1 Delivery
GEO Satellite 2 Available for...
GEO Message Certification
GEO Satellite 3 Available for...
Initial Increment 2 Ground A...
GEO Satellite 4 Available for...
GEO Satellite 4 Ready for P...
Final Increment 2 Ground Ar...
Low Component Dem/Val L...
Block Buy (GEO 5-6)
GEO Satellite 5 Available for...
GEO Satellite 6 Available for...

Baseline (GEO 1-4, HEO 1-2, and Ground)

Schedule Events					
Events	**SAR Baseline Development Estimate**	**Current APB Production Objective/Threshold**		**Current Estimate**	
High Component Milestone II	Oct 1996	Oct 1996	Oct 1996	Oct 1996	
Low Component FDS CDR	Dec 1996	N/A	N/A	N/A	
High Component PDR (Space and Ground Increment 2)	Dec 1997	Dec 1997	May 1998	Dec 1997	
Low Component FDS Launch	Sep 1999	N/A	N/A	N/A	
Low Component Pre-EMD Start	Oct 1999	N/A	N/A	N/A	
Low Component Milestone II	Dec 2000	N/A	N/A	N/A	
High Component CDR (Space and Ground Increment 2)	Sep 1999	Aug 2001	Aug 2001	Aug 2001	
Ground Segment Increment 1 Certification	Aug 1999	Dec 2001	Dec 2001	Dec 2001	
Ground Segment Increment 2 Certification	Jan 2002	N/A	N/A	N/A	
GEO Satellite 2 Launch	Jun 2003	N/A	N/A	N/A	
SBIRS IOC	Dec 2003	N/A	N/A	N/A	
GEO Satellite 3 Launch	Jun 2004	N/A	N/A	N/A	
HEO Sensor 1 Delivery	Sep 2001	Aug 2004	Aug 2004	Aug 2004	
GEO Satellite 4 Launch	Jun 2005	N/A	N/A	N/A	
HEO Sensor 2 Delivery	Sep 2003	Sep 2005	Sep 2005	Sep 2005	
HEO Message Certification	N/A	Dec 2008	Dec 2008	Dec 2008	
GEO Satellite 1 Delivery	N/A	Mar 2011	Mar 2011	Mar 2011	
GEO Satellite 2 Available for Delivery	N/A	Jun 2012	Dec 2012	Jun 2012	
GEO Message Certification	N/A	Oct 2012	Oct 2013	Aug 2013	
GEO Satellite 3 Available for Delivery	N/A	Dec 2015	Jun 2016	Jul 2015	(Ch-1)
Initial Increment 2 Ground Architecture	N/A	Jun 2016	Dec 2016	Nov 2016	(Ch-2)
GEO Satellite 4 Available for Delivery	N/A	Dec 2016	Jun 2017	Mar 2016	
GEO Satellite 4 Ready for PEO Certification	N/A	Feb 2018	Aug 2018	May 2018	
Final Increment 2 Ground Architecture	N/A	Sep 2018	Sep 2019	Jun 2018	
Low Component Dem/Val Launch	TBD	N/A	N/A	N/A	

Change Explanations

(Ch-1) The current estimate for GEO Satellite 3 Available for Delivery changed from May 2015 to July 2015 upon GEO Satellite 3 entering storage on July 14, 2015.
(Ch-2) The current estimate for Initial Increment Ground Architecture changed form June 2016 to November 2016 due to additional operator training, operations facility upgrades, and the challenges associated with integrating Defense Satellite Program software Discrepancy Reports into the baseline.

Notes

GEO Satellite "Available for Delivery" is defined as the satellite successfully completing Final Integrated System Test and the satellite is available such that if operational priorities require the satellite to launch at the earliest opportunity, then the satellite will continue final install processing to proceed to a Consent to Ship Review. If operational priorities indicate a later manifest, the satellite will be configured for storage.

Acronyms and Abbreviations

CDR - Critical Design Review
Dem/Val - Demonstration/Validation
FDS - Flight Demonstration System
PDR - Preliminary Design Review

Block Buy (GEO 5-6)

Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
GEO Satellite 5 Available for Delivery	Sep 2019	Sep 2019	Sep 2020	Sep 2020
GEO Satellite 6 Available for Delivery	Sep 2020	Sep 2020	Sep 2021	Jul 2021

Change Explanations

None

Notes

GEO Satellite "Available for Delivery" is defined as the GEO satellite successfully completing Final Integrated System Test and the satellite is available such that if operational priorities require the satellite to launch at the earliest opportunity, then the satellite will continue Final Install processing to proceed to a Consent-to-Ship Review. If operational priorities indicate a later manifest, then the satellite will be configured for storage.

GEO 5 and 6 delivery dates reflect the as-negotiated dates.

The one-year period between the objective and threshold values addresses the schedule risk inherent in the first time production under a fixed price contract for a SBIRS satellite.

Performance

Baseline (GEO 1-4, HEO 1-2, and Ground)

Classified Performance information is provided in the classified annex to this submission.

Notes

Performance assessment is based on the full SBIRS constellation and Ground Segment.

Block Buy (GEO 5-6)

No performance characteristics exist for Block Buy (GEO 5-6).

Notes

Performance assessment is based on the full SBIRS constellation and Ground Segment.

Track to Budget

Baseline (GEO 1-4, HEO 1-2, and Ground)

General Notes

RDT&E Program Element (PE) 0604441F and Missile Procurement Air Force PE 0305915F, Line Item MSSBIR and 836720, are shared. PE 0604441F includes funds for the Commercially Hosted Infrared Payload, Space Modernization Initiative and architecture studies that are not part of this MDAP. Line Item MSSBIR and 836720 include funds for Highly Elliptical Orbit payloads 3 and 4 that are not part of this MDAP.

In December 2014, the Office of Management and Budget directed the DoD to establish a new space procurement appropriation as a three-year availability account. Beginning in FY 2016, Air Force major procurement funding formerly under appropriation 3020F (Missile Procurement, Air Force) BA 05 will now be under 3021F (Space Procurement, Air Force) BA 01. The FY 2017 PB justification books reflect the new 3021F appropriation, and the SARs for programs impacted by this new appropriation also reflect this change.

RDT&E

Appn	BA	PE
Air Force	3600	05	0604441F

Project	Name	
653616	SBIRS High Element EMD/SBIRS High EMD	(Shared)

Procurement

Appn	BA	PE
Air Force	3020	05	0305915F

Line Item	Name		
MSSBIR	SBIRS High Missile Procurement	(Shared)	(Sunk)

Appn	BA	PE
Air Force	3021	01	0305915F

Line Item	Name	
MSSBIR	SBIRS High (Space)	(Shared)

Appn	BA	PE
Air Force	3080	03	0305915F

Line Item	Name	
836720	Space Based IR Sensor Program Space	(Shared)

MILCON

Appn	BA	PE
Air Force	3300	01	0604441F

Project	Name	
F0300051	SBIRS ARCHI-EMD (SPACE) Military Construction	(Sunk)

Acq O&M

Appn	BA	PE
Air Force	3400	01	0305915F

Project	Name	
1G01	SBIRS Operation and Maintenance	(Sunk)

Block Buy (GEO 5-6)

Procurement

Appn		BA	PE		
Air Force	3020	05	0305915F		
	Line Item		**Name**		
	MSSBIR		SBIRS High Missile Procurement	(Shared)	(Sunk)
Air Force	3021	01	0305915F		
	Line Item		**Name**		
	MSSBIR		SBIRS High (Space)	(Shared)	

Cost and Funding

Cost Summary - Total Program

Total Acquisition Cost - Total Program							
Appropriation	BY 1995 $M			BY 1995 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	3016.6	8544.3	--	8451.2	3386.5	10299.1	10184.5
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Procurement	3178.3	5193.6	--	4734.1	4449.9	7193.2	6591.5
Flyaway	--	--	--	4059.1	--	--	5644.4
Recurring	--	--	--	3296.2	--	--	4604.8
Non Recurring	--	--	--	762.9	--	--	1039.6
Support	--	--	--	675.0	--	--	947.1
Other Support	--	--	--	675.0	--	--	947.1
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	26.0	52.0	--	52.0	28.5	57.0	57.0
Acq O&M	140.2	137.5	--	112.8	147.8	161.1	161.1
Total	6361.1	13927.4	N/A	13350.1	8012.7	17710.4	16994.1

Cost and Funding

Cost Summary - Baseline (GEO 1-4, HEO 1-2, and Ground)

Total Acquisition Cost - Baseline (GEO 1-4, HEO 1-2, and Ground)							
Appropriation	BY 1995 $M			BY 1995 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	3016.6	8544.3	9398.7	8451.2	3386.5	10299.1	10184.5
Procurement	496.7	2512.0	2763.2	2450.6	584.5	3327.8	3263.3
Flyaway	--	--	--	2029.2	--	--	2698.4
Recurring	--	--	--	1635.0	--	--	2178.7
Non Recurring	--	--	--	394.2	--	--	519.7
Support	--	--	--	421.4	--	--	564.9
Other Support	--	--	--	421.4	--	--	564.9
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	26.0	52.0	57.2	52.0	28.5	57.0	57.0
Acq O&M	140.2	137.5	151.3	112.8	147.8	161.1	161.1
Total	3679.5	11245.8	N/A	11066.6	4147.3	13845.0	13665.9

Confidence Level

Confidence Level of cost estimate for current APB: 55%

Research, Development, Test and Evaluation cost profile is based on the April 2011 Air Force SCP at a 57% confidence level. The Missile Procurement, Air Force cost profile for Geosynchronous Earth Orbit (GEO) satellites 3 and 4 is based on the April 2011 SCP at a 54% confidence level, with fact-of-life modifications.

Cost Notes

The costs above reflect the FY 2017 PB for the FYDP for GEO satellites 1-4, HEO payloads 1 and 2, and ground modifications to meet the requirements in the SBIRS ORD, plus the cost to complete beyond the FYDP.

Total Quantity - Baseline (GEO 1-4, HEO 1-2, and Ground)			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	3	2	2
Procurement	2	2	2
Total	5	4	4

Quantity Notes

The above quantity represents four GEO satellites.

Cost Summary - Block Buy (GEO 5-6)

Total Acquisition Cost - Block Buy (GEO 5-6)							
Appropriation	BY 1995 $M			BY 1995 $M	TY $M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Procurement	2681.6	2681.6	2949.8	2283.5	3865.4	3865.4	3328.2
Flyaway	--	--	--	2029.9	--	--	2946.0
Recurring	--	--	--	1661.2	--	--	2426.1
Non Recurring	--	--	--	368.7	--	--	519.9
Support	--	--	--	253.6	--	--	382.2
Other Support	--	--	--	253.6	--	--	382.2
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	2681.6	2681.6	N/A	2283.5	3865.4	3865.4	3328.2

Confidence Level

Confidence Level of cost estimate for current APB: 50%

The ICE to support the SBIRS Geosynchronous Earth Orbit (GEO) 5-6 procurement, like all life-cycle cost estimates previously performed by the CAPE, is built upon a product-oriented work breakdown structure, based on historical actual cost information to the maximum extent possible, and, most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which the Department has been successful.

It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for MDAPs. Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described.

Cost Notes

The Procurement profile above reflects costs for the delivery of the GEO satellites 5 and 6, as documented in the FY 2017 PB.

Total Quantity - Block Buy (GEO 5-6)			
Quantity	**SAR Baseline Production Estimate**	**Current APB Production**	**Current Estimate**
RDT&E	0	0	0
Procurement	2	2	2
Total	2	2	2

Quantity Notes

The above quantity represents two GEO satellites.

Cost and Funding

Funding Summary - Total Program

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	9791.8	188.3	108.9	95.5	0.0	0.0	0.0	0.0	10184.5
Procurement	4482.1	532.4	334.5	925.5	110.8	102.2	104.0	0.0	6591.5
MILCON	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0
Acq O&M	161.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	161.1
PB 2017 Total	14492.0	720.7	443.4	1021.0	110.8	102.2	104.0	0.0	16994.1
PB 2016 Total	14487.3	721.4	509.7	1088.5	119.6	111.0	118.3	0.0	17155.8
Delta	4.7	-0.7	-66.3	-67.5	-8.8	-8.8	-14.3	0.0	-161.7

Cost and Funding

Funding Summary - Baseline (GEO 1-4, HEO 1-2, and Ground)

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	9791.8	188.3	108.9	95.5	0.0	0.0	0.0	0.0	10184.5
Procurement	2947.8	152.7	103.5	35.4	7.8	8.0	8.1	0.0	3263.3
MILCON	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0
Acq O&M	161.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	161.1
PB 2017 Total	12957.7	341.0	212.4	130.9	7.8	8.0	8.1	0.0	13665.9
PB 2016 Total	12953.0	341.6	214.3	132.0	7.9	8.0	0.0	0.0	13656.8
Delta	4.7	-0.6	-1.9	-1.1	-0.1	0.0	8.1	0.0	9.1

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	2	0	0	0	0	0	0	0	2
PB 2017 Total	2	2	0	0	0	0	0	0	0	4
PB 2016 Total	2	2	0	0	0	0	0	0	0	4
Delta	0	0	0	0	0	0	0	0	0	0

Funding Summary - Block Buy (GEO 5-6)

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Procurement	1534.3	379.7	231.0	890.1	103.0	94.2	95.9	0.0	3328.2
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2017 Total	1534.3	379.7	231.0	890.1	103.0	94.2	95.9	0.0	3328.2
PB 2016 Total	1534.3	379.8	295.4	956.5	111.7	103.0	118.3	0.0	3499.0
Delta	0.0	-0.1	-64.4	-66.4	-8.7	-8.8	-22.4	0.0	-170.8

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	2	0	0	0	0	0	0	0	2
PB 2017 Total	0	2	0	0	0	0	0	0	0	2
PB 2016 Total	0	2	0	0	0	0	0	0	0	2
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation - Baseline (GEO 1-4, HEO 1-2, and Ground)

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1995	--	--	--	--	--	--	113.0
1996	--	--	--	--	--	--	164.0
1997	--	--	--	--	--	--	193.0
1998	--	--	--	--	--	--	337.9
1999	--	--	--	--	--	--	502.6
2000	--	--	--	--	--	--	400.0
2001	--	--	--	--	--	--	550.1
2002	--	--	--	--	--	--	524.5
2003	--	--	--	--	--	--	782.9
2004	--	--	--	--	--	--	621.8
2005	--	--	--	--	--	--	587.1
2006	--	--	--	--	--	--	706.6
2007	--	--	--	--	--	--	693.0
2008	--	--	--	--	--	--	583.3
2009	--	--	--	--	--	--	542.4
2010	--	--	--	--	--	--	521.5
2011	--	--	--	--	--	--	501.7
2012	--	--	--	--	--	--	603.9
2013	--	--	--	--	--	--	368.3
2014	--	--	--	--	--	--	264.6
2015	--	--	--	--	--	--	229.6
2016	--	--	--	--	--	--	188.3
2017	--	--	--	--	--	--	108.9
2018	--	--	--	--	--	--	95.5
Subtotal	2	--	--	--	--	--	10184.5

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 1995 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1995	--	--	--	--	--	--	111.3
1996	--	--	--	--	--	--	158.7
1997	--	--	--	--	--	--	184.4
1998	--	--	--	--	--	--	320.3
1999	--	--	--	--	--	--	472.1
2000	--	--	--	--	--	--	369.9
2001	--	--	--	--	--	--	501.3
2002	--	--	--	--	--	--	473.1
2003	--	--	--	--	--	--	697.3
2004	--	--	--	--	--	--	540.1
2005	--	--	--	--	--	--	496.9
2006	--	--	--	--	--	--	580.9
2007	--	--	--	--	--	--	555.0
2008	--	--	--	--	--	--	457.9
2009	--	--	--	--	--	--	420.5
2010	--	--	--	--	--	--	398.9
2011	--	--	--	--	--	--	376.8
2012	--	--	--	--	--	--	445.7
2013	--	--	--	--	--	--	267.3
2014	--	--	--	--	--	--	189.5
2015	--	--	--	--	--	--	162.8
2016	--	--	--	--	--	--	131.5
2017	--	--	--	--	--	--	74.7
2018	--	--	--	--	--	--	64.3
Subtotal	2	--	--	--	--	--	8451.2

Funds for the Commercially Hosted Infrared Payload (CHIRP), project number A040, were excluded from this report. Those RDT&E funds are not associated with the baseline SBIRS program.

The excluded profile is (TY$): $39.8M

Funds for Space Modernization Initiative efforts, project number 7009, were excluded from this report. Those RDT&E funds are not associated with the baseline SBIRS program.

The excluded profile is (TY$): $831.9M

Funds for Evolved SBIRS, project number 7106, were excluded from this report. Those RDT&E funds are not associated with the baseline SBIRS program.

The excluded profile is (TY$): $2.2543B

PE0604441F is shared with HEO replenishment Payload's ground effort, which is not part of the MDAP. $39.7M in FY 2013 funds and $14.6M in FY 2016 funds associated with that effort are excluded from the report.

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3020 | Procurement | Missile Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2008	--	160.3	--	103.2	263.5	5.9	269.4
2009	1	949.0	--	323.7	1272.7	21.3	1294.0
2010	--	144.4	1.1	5.4	150.9	28.4	179.3
2011	1	583.5	--	18.6	602.1	33.0	635.1
2012	--	0.5	42.7	0.3	43.5	23.3	66.8
2013	--	0.2	31.8	1.3	33.3	16.8	50.1
2014	--	7.7	50.3	2.8	60.8	8.9	69.7
2015	--	31.1	34.6	19.7	85.4	9.8	95.2
Subtotal	2	1876.7	160.5	475.0	2512.2	147.4	2659.6

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3020 | Procurement | Missile Procurement, Air Force							
Fiscal Year	Quantity	BY 1995 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2008	--	125.0	--	80.5	205.5	4.6	210.1
2009	1	729.9	--	249.0	978.9	16.4	995.3
2010	--	109.4	0.8	4.1	114.3	21.6	135.9
2011	1	433.4	--	13.8	447.2	24.5	471.7
2012	--	0.4	31.2	0.2	31.8	17.0	48.8
2013	--	0.1	22.8	0.9	23.8	12.0	35.8
2014	--	5.4	35.4	2.0	42.8	6.3	49.1
2015	--	21.6	24.2	13.7	59.5	6.8	66.3
Subtotal	2	1425.2	114.4	364.2	1903.8	109.2	2013.0

The Missile Procurement Air Force (MPAF) funding profile above represents funding for GEO satellites 3 and 4 as displayed in the associated P-5 exhibits in the FY 2017 PB. MPAF funds for HEO 3 and 4 payloads are excluded above, but are reflected in the associated P-5 exhibit in the FY 2017 PB.

The FYDP excluded profile is (TY$): $1.1108B

Cost Quantity Information - Baseline (GEO 1-4, HEO 1-2, and Ground) 3020 | Procurement | Missile Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 1995 $M**
2008	--	--
2009	1	922.5
2010	--	--
2011	1	502.7
2012	--	--
2013	--	--
2014	--	--
2015	--	--
Subtotal	2	1425.2

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3080 | Procurement | Other Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	--	--	--	--	96.4	96.4
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	3.6	3.6
2007	--	--	--	--	--	6.5	6.5
2008	--	--	--	--	--	3.8	3.8
2009	--	--	--	--	--	1.9	1.9
2010	--	--	--	--	--	2.0	2.0
2011	--	--	--	--	--	24.7	24.7
2012	--	--	--	--	--	49.7	49.7
2013	--	--	--	--	--	39.6	39.6
2014	--	--	--	--	--	28.6	28.6
2015	--	--	--	--	--	31.4	31.4
Subtotal	--	--	--	--	--	288.2	288.2

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3080 | Procurement | Other Procurement, Air Force							
Fiscal Year	Quantity	BY 1995 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	--	--	--	--	84.1	84.1
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	3.0	3.0
2007	--	--	--	--	--	5.2	5.2
2008	--	--	--	--	--	3.0	3.0
2009	--	--	--	--	--	1.5	1.5
2010	--	--	--	--	--	1.5	1.5
2011	--	--	--	--	--	18.6	18.6
2012	--	--	--	--	--	36.7	36.7
2013	--	--	--	--	--	28.8	28.8
2014	--	--	--	--	--	20.5	20.5
2015	--	--	--	--	--	22.3	22.3
Subtotal	--	--	--	--	--	225.2	225.2

Other Procurement, Air Force funding for FY2016-2021 transferred to Space Procurement, Air Force.

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	--
2016	--	15.7	36.8	10.0	62.5	90.2	152.7
2017	--	--	71.5	24.5	96.0	7.5	103.5
2018	--	--	17.5	10.2	27.7	7.7	35.4
2019	--	--	--	--	--	7.8	7.8
2020	--	--	--	--	--	8.0	8.0
2021	--	--	--	--	--	8.1	8.1
Subtotal	--	15.7	125.8	44.7	186.2	129.3	315.5

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	BY 1995 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	--
2016	--	10.7	25.2	6.8	42.7	61.8	104.5
2017	--	--	48.0	16.5	64.5	5.0	69.5
2018	--	--	11.5	6.7	18.2	5.1	23.3
2019	--	--	--	--	--	5.0	5.0
2020	--	--	--	--	--	5.1	5.1
2021	--	--	--	--	--	5.0	5.0
Subtotal	--	10.7	84.7	30.0	125.4	87.0	212.4

The 3080 appropriation reduction for FY 2016 and beyond is due moving these funds to the new Space Procurement Air Force (SPAF) 3021 appropriation.

The SPAF funding profile above represents funding for GEO satellites 3 and 4 as displayed in the associated P-5 exhibits in the FY 2017 PB. MPAF funds for HEO 3 and 4 payloads are excluded above, but are reflected in the associated P-5 exhibit in the FY 2017 PB.

Total excluded funding over FYDP (TY$): $38.4M

The End Item Recurring Flyaway cost listed below is associated with a 3020 buy.

Cost Quantity Information - Baseline (GEO 1-4, HEO 1-2, and Ground) 3021 | Procurement | Space Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 1995 $M**
2009	--	5.0
2010	--	--
2011	--	5.7
2012	--	--
2013	--	--
2014	--	--
2015	--	--
2016	--	--
2017	--	--
2018	--	--
2019	--	--
2020	--	--
2021	--	--
Subtotal	--	10.7

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3300 | MILCON | Military Construction, Air Force	
Fiscal Year	TY $M
	Total Program
1997	14.5
1998	14.0
1999	--
2000	--
2001	2.8
2002	18.8
2003	6.9
Subtotal	57.0

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3300 | MILCON | Military Construction, Air Force	
Fiscal Year	**BY 1995 $M**
	Total Program
1997	13.7
1998	13.1
1999	--
2000	--
2001	2.5
2002	16.7
2003	6.0
Subtotal	52.0

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3400 | Acq O&M | Operation and Maintenance, Air Force	
Fiscal Year	TY $M
	Total Program
1998	10.4
1999	17.0
2000	15.6
2001	17.6
2002	18.2
2003	0.3
2004	6.9
2005	7.0
2006	5.4
2007	7.6
2008	9.7
2009	10.2
2010	10.2
2011	11.5
2012	13.5
Subtotal	161.1

Annual Funding - Baseline (GEO 1-4, HEO 1-2, and Ground) 3400 | Acq O&M | Operation and Maintenance, Air Force	
Fiscal Year	BY 1995 $M
	Total Program
1998	8.1
1999	13.1
2000	11.9
2001	13.2
2002	13.5
2003	0.2
2004	4.9
2005	4.8
2006	3.6
2007	5.0
2008	6.3
2009	6.5
2010	6.4
2011	7.1
2012	8.2
Subtotal	112.8

Annual Funding By Appropriation - Block Buy (GEO 5-6)

Annual Funding - Block Buy (GEO 5-6) 3020 | Procurement | Missile Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2011	--	103.6	--	139.7	243.3	--	243.3
2012	--	192.0	--	51.5	243.5	--	243.5
2013	2	196.2	--	89.8	286.0	22.1	308.1
2014	--	311.0	--	78.2	389.2	36.3	425.5
2015	--	223.7	--	60.1	283.8	30.1	313.9
Subtotal	2	1026.5	--	419.3	1445.8	88.5	1534.3

Annual Funding - Block Buy (GEO 5-6) 3020 | Procurement | Missile Procurement, Air Force							
Fiscal Year	Quantity	BY 1995 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2011	--	76.9	--	103.8	180.7	--	180.7
2012	--	140.2	--	37.6	177.8	--	177.8
2013	2	140.1	--	64.1	204.2	15.8	220.0
2014	--	219.0	--	55.0	274.0	25.6	299.6
2015	--	155.7	--	41.9	197.6	20.9	218.5
Subtotal	2	731.9	--	302.4	1034.3	62.3	1096.6

The procurement profile above reflects procurement costs for the delivery of the GEO satellites 5 and 6, as documented in the FY 2017 PB. The costs above reflect the requirements for GEOs 5 and 6 production, launch, operations, checkout and support.

Cost Quantity Information - Block Buy (GEO 5-6) 3020 | Procurement | Missile Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 1995 $M**
2011	--	--
2012	--	--
2013	2	731.9
2014	--	--
2015	--	--
Subtotal	2	731.9

Annual Funding - Block Buy (GEO 5-6) 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	--
2016	--	296.6	--	25.4	322.0	57.7	379.7
2017	--	158.3	25.3	15.4	199.0	32.0	231.0
2018	--	456.9	361.9	32.5	851.3	38.8	890.1
2019	--	35.2	--	3.6	38.8	64.2	103.0
2020	--	33.6	--	16.7	50.3	43.9	94.2
2021	--	31.8	--	7.0	38.8	57.1	95.9
Subtotal	--	1012.4	387.2	100.6	1500.2	293.7	1793.9

Annual Funding - Block Buy (GEO 5-6) 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	BY 1995 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	--
2016	--	202.9	--	17.4	220.3	39.5	259.8
2017	--	106.3	17.0	10.3	133.6	21.5	155.1
2018	--	301.0	238.4	21.4	560.8	25.6	586.4
2019	--	22.7	--	2.3	25.0	41.5	66.5
2020	--	21.3	--	10.6	31.9	27.7	59.6
2021	--	19.7	--	4.3	24.0	35.5	59.5
Subtotal	--	673.9	255.4	66.3	995.6	191.3	1186.9

The procurement profile above reflects procurement costs for the delivery of the GEO satellites 5 and 6, as documented in the FY 2017 PB. The costs above reflect the requirements for GEOs 5 and 6 production, launch, operations, checkout and support.

The End Item Recurring Flyaway cost listed below is associated with a 3020 quantity buy.

Cost Quantity Information - Block Buy (GEO 5-6) 3021 | Procurement | Space Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 1995 $M**
2013	--	673.9
2014	--	--
2015	--	--
2016	--	--
2017	--	--
2018	--	--
2019	--	--
2020	--	--
2021	--	--
Subtotal	--	673.9

Low Rate Initial Production

Baseline (GEO 1-4, HEO 1-2, and Ground)

There is no LRIP for this program.

Block Buy (GEO 5-6)

There is no LRIP for this program.

Foreign Military Sales

Baseline (GEO 1-4, HEO 1-2, and Ground)

Country	Date of Sale	Quantity	Total Cost $M	Description
Australia	3/8/2012	0	18.0	The FMS case with Australia established the agreement for the sale of a SBIRS satellite data processor, satellite data interface system, and contractor logistics support.

Notes

Block Buy (GEO 5-6)

None

Nuclear Costs

Baseline (GEO 1-4, HEO 1-2, and Ground)

None

Block Buy (GEO 5-6)

None

Unit Cost

Baseline (GEO 1-4, HEO 1-2, and Ground)

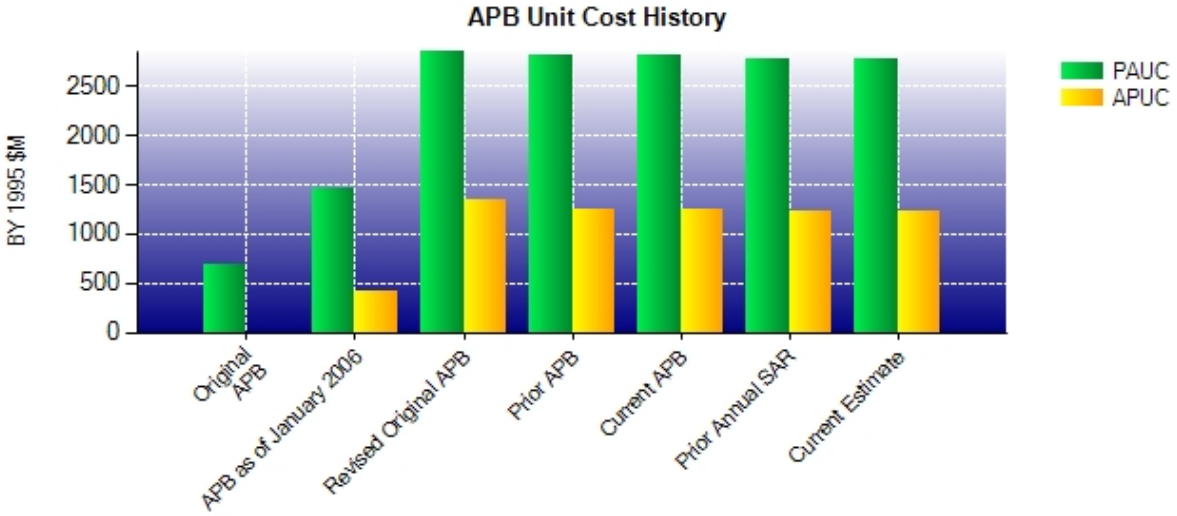
Unit Cost Report

Item	BY 1995 $M Current UCR Baseline (Feb 2013 APB)	BY 1995 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	11245.8	11066.6	
Quantity	4	4	
Unit Cost	2811.450	2766.650	-1.59
Average Procurement Unit Cost			
Cost	2512.0	2450.6	
Quantity	2	2	
Unit Cost	1256.000	1225.300	-2.44

Item	BY 1995 $M Revised Original UCR Baseline (Mar 2006 APB)	BY 1995 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	8569.3	11066.6	
Quantity	3	4	
Unit Cost	2856.433	2766.650	-3.14
Average Procurement Unit Cost			
Cost	1342.8	2450.6	
Quantity	1	2	
Unit Cost	1342.800	1225.300	-8.75

Baseline (GEO 1-4, HEO 1-2, and Ground)

Unit Cost History



Item	Date	BY 1995 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Oct 1996	693.980	N/A	732.340	N/A
APB as of January 2006	Sep 2002	1467.640	420.500	1684.180	499.133
Revised Original APB	Mar 2006	2856.433	1342.800	3386.200	1723.200
Prior APB	Sep 2012	2811.450	1256.000	3461.250	1663.900
Current APB	Feb 2013	2811.450	1256.000	3461.250	1663.900
Prior Annual SAR	Dec 2014	2770.300	1220.650	3414.200	1625.500
Current Estimate	Dec 2015	2766.650	1225.300	3416.475	1631.650

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
829.460	29.725	169.190	129.200	126.600	1989.450	0.000	142.850	2587.015	3416.475

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
292.250	34.100	0.000	0.000	0.000	1019.600	0.000	285.700	1339.400	1631.650

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	Oct 1996	N/A	Oct 1996
Milestone III	N/A	N/A	N/A	N/A
IOC	N/A	Dec 2003	N/A	N/A
Total Cost (TY $M)	2670.3	4147.3	N/A	13665.9
Total Quantity	N/A	5	N/A	4
PAUC	N/A	829.460	N/A	3416.475

Block Buy (GEO 5-6)

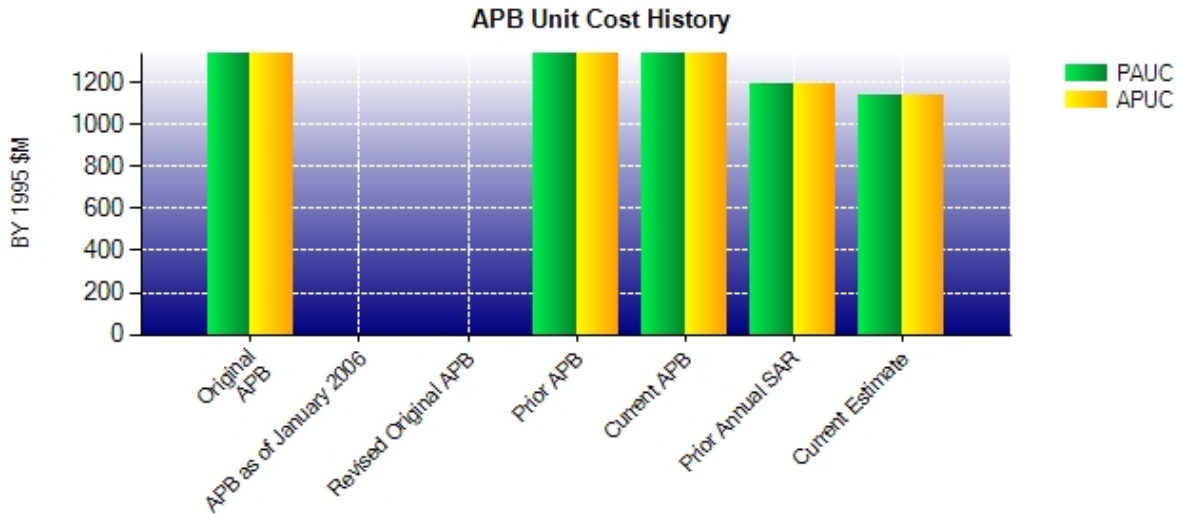
Unit Cost Report

Item	BY 1995 $M Current UCR Baseline (Feb 2013 APB)	BY 1995 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	2681.6	2283.5	
Quantity	2	2	
Unit Cost	1340.800	1141.750	-14.85
Average Procurement Unit Cost			
Cost	2681.6	2283.5	
Quantity	2	2	
Unit Cost	1340.800	1141.750	-14.85

Item	BY 1995 $M Original UCR Baseline (Sep 2012 APB)	BY 1995 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	2681.6	2283.5	
Quantity	2	2	
Unit Cost	1340.800	1141.750	-14.85
Average Procurement Unit Cost			
Cost	2681.6	2283.5	
Quantity	2	2	
Unit Cost	1340.800	1141.750	-14.85

Block Buy (GEO 5-6)

Unit Cost History



Item	Date	BY 1995 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Sep 2012	1340.800	1340.800	1932.700	1932.700
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Sep 2012	1340.800	1340.800	1932.700	1932.700
Current APB	Feb 2013	1340.800	1340.800	1932.700	1932.700
Prior Annual SAR	Dec 2014	1191.200	1191.200	1749.500	1749.500
Current Estimate	Dec 2015	1141.750	1141.750	1664.100	1664.100

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
Initial PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1932.700	26.300	0.000	0.000	0.000	-212.000	0.000	-82.900	-268.600	1664.100

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1932.700	26.300	0.000	0.000	0.000	-212.000	0.000	-82.900	-268.600	1664.100

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	N/A	N/A	N/A
Total Cost (TY $M)	N/A	N/A	3865.4	3328.2
Total Quantity	N/A	N/A	2	2
PAUC	N/A	N/A	1932.700	1664.100

Cost Variance

Baseline (GEO 1-4, HEO 1-2, and Ground)

Summary TY $M					
Item	**RDT&E**	**Procurement**	**MILCON**	**Acq O&M**	**Total**
SAR Baseline (Development Estimate)	3386.5	584.5	28.5	147.8	4147.3
Previous Changes					
Economic	+19.1	+72.3	-1.4	+1.9	+91.9
Quantity	-152.7	--	--	--	-152.7
Schedule	+516.8	--	--	--	+516.8
Engineering	+514.2	--	+7.8	-15.6	+506.4
Estimating	+5903.8	+2032.9	+22.1	+27.0	+7985.8
Other	--	--	--	--	--
Support	--	+561.3	--	--	+561.3
Subtotal	+6801.2	+2666.5	+28.5	+13.3	+9509.5
Current Changes					
Economic	-4.0	-4.1	--	+35.1	+27.0
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+0.8	+6.3	--	-35.1	-28.0
Other	--	--	--	--	--
Support	--	+10.1	--	--	+10.1
Subtotal	-3.2	+12.3	--	--	+9.1
Total Changes	+6798.0	+2678.8	+28.5	+13.3	+9518.6
CE - Cost Variance	10184.5	3263.3	57.0	161.1	13665.9
CE - Cost & Funding	10184.5	3263.3	57.0	161.1	13665.9

Summary BY 1995 $M					
Item	**RDT&E**	**Procurement**	**MILCON**	**Acq O&M**	**Total**
SAR Baseline (Development Estimate)	3016.6	496.7	26.0	140.2	3679.5
Previous Changes					
Economic	--	--	--	--	--
Quantity	-128.4	--	--	--	-128.4
Schedule	+384.8	--	--	--	+384.8
Engineering	+460.5	--	+6.8	-13.5	+453.8
Estimating	+4717.0	+1528.2	+19.2	+10.7	+6275.1
Other	--	--	--	--	--
Support	--	+416.4	--	--	+416.4
Subtotal	+5433.9	+1944.6	+26.0	-2.8	+7401.7
Current Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+0.7	+4.3	--	-24.6	-19.6
Other	--	--	--	--	--
Support	--	+5.0	--	--	+5.0
Subtotal	+0.7	+9.3	--	-24.6	-14.6
Total Changes	+5434.6	+1953.9	+26.0	-27.4	+7387.1
CE - Cost Variance	8451.2	2450.6	52.0	112.8	11066.6
CE - Cost & Funding	8451.2	2450.6	52.0	112.8	11066.6

Previous Estimate: December 2014

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-4.0
Adjustment for current and prior escalation. (Estimating)	+1.8	+2.6
Revised estimate to reflect application of Department-wide inflationary adjustments. (Estimating)	-1.1	-1.8
RDT&E Subtotal	+0.7	-3.2

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-4.1
Adjustment for current and prior escalation. (Estimating)	+1.3	+1.8
Revised estimate for MPAF as a result of realignment of Other Government Costs (OGCs) Missile Procurement, Air Force (MPAF). (Estimating)	+2.6	+3.9
Revised estimate due to incorporation of additional funding for OGC (Space Procurement, Air Force (SPAF)). (Estimating)	+0.3	+0.5
Revised estimate for OPAF as a result of inflation adjustment. (Estimating)	+0.1	+0.1
Adjustment for current and prior escalation. (Support)	+0.8	+1.0
Increase in Other Support for MPAF due to the realigning of OGC flyaway to support costs (MPAF). (Support)	-2.6	-3.9
Decrease in Other Support as a result of reducing reserve funds based on program maturity (Other Procurement, Air force (OPAF)). (Support)	-79.8	-115.9
Increase in Other Support due to the realignment of funds from OPAF to SPAF. (Support)	+86.6	+128.9
Procurement Subtotal	+9.3	+12.3

Acq O&M	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+35.1
Adjustment for current and prior escalation. (Estimating)	-24.6	-35.1
Acq O&M Subtotal	-24.6	0.0

Cost Variance

Block Buy (GEO 5-6)

Summary TY $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Production Estimate)	--	3865.4	--	3865.4
Previous Changes				
Economic	--	+72.5	--	+72.5
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	-452.9	--	-452.9
Other	--	--	--	--
Support	--	+14.0	--	+14.0
Subtotal	--	-366.4	--	-366.4
Current Changes				
Economic	--	-19.9	--	-19.9
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+28.9	--	+28.9
Other	--	--	--	--
Support	--	-179.8	--	-179.8
Subtotal	--	-170.8	--	-170.8
Total Changes	--	-537.2	--	-537.2
CE - Cost Variance	--	3328.2	--	3328.2
CE - Cost & Funding	--	3328.2	--	3328.2

Summary BY 1995 $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Production Estimate)	--	2681.6	--	2681.6
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	-305.4	--	-305.4
Other	--	--	--	--
Support	--	+6.2	--	+6.2
Subtotal	--	-299.2	--	-299.2
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+18.5	--	+18.5
Other	--	--	--	--
Support	--	-117.4	--	-117.4
Subtotal	--	-98.9	--	-98.9
Total Changes	--	-398.1	--	-398.1
CE - Cost Variance	--	2283.5	--	2283.5
CE - Cost & Funding	--	2283.5	--	2283.5

Previous Estimate: December 2014

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-19.9
Adjustment for current and prior escalation. (Estimating)	+4.6	+6.8
Revised estimate due primarily to realigning the Aerospace Weapon System (WS) and rate update on the overall Aerospace requirement (MPAF). (Estimating)	+8.2	+11.7
Revised estimate due primarily to realigning the Aerospace WS and rate update on the overall Aerospace requirement (SPAF). (Estimating)	+5.7	+10.6
Revised estimate to reflect application of Department-wide inflationary adjustments. (MPAF) (Estimating)	0.0	-0.2
Adjustment for current and prior escalation. (Support)	+0.7	+0.8
Decrease in Other Support due to the transfer of FY 2015 funds to SPAF (MPAF). (Support)	-8.2	-11.5
Decrease in Other Support due to reduction of reserve funds based on program maturity and transfer of funds from MPAF (SPAF). (Support)	-109.9	-169.1
Procurement Subtotal	-98.9	-170.8

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: SBIRS 5-6 Initial Non-Recurring Engineering
Contractor: Lockheed Martin Corporation
Contractor Location: Sunnyvale, CA 94089
Contract Number: FA8810-12-C-0001
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: September 10, 2012
Definitization Date: September 11, 2012

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
81.9	N/A	N/A	147.1	N/A	N/A	141.2	148.6

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the GEO 5 and 6 Initial Non-Recurring Engineering (I-NRE) contract being awarded in September 2012, with an Engineering Change Proposal (ECP) to modify the contract to complete all component builds through component qualification added in December 2012. It is a CPIF contract with a Contract Target Price of $148.6M, which includes the I-NRE and the ECP.

There is no contract quantity associated with this I-NRE contract.

The Contractor Estimated Price at Completion is $141.2M compared to $147.3M in the December 2014 SAR. The decrease is due to EAC efficiencies in Payload Systems Engineering, Integration and Test support. The Government's Estimated Price at Completion remains at $148.6M.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/30/2016)	+5.8	-0.1
Previous Cumulative Variances	+8.6	+12.8
Net Change	-2.8	-12.9

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to the prime contractor using additional resources to closeout the manufacturing Special Test Equipment activity.

The unfavorable net change in the schedule variance is due to pending budget allocations being added into the baseline and delays with Space Bus Communications unit assemblies.

Notes

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: Procurement
Contract Name: SBIRS Follow-on Production
Contractor: Lockheed Martin Corporation
Contractor Location: Sunnyvale, CA 94089
Contract Number: FA8810-08-C-0002
Contract Type: Cost Plus Award Fee (CPAF)
Award Date: March 14, 2008
Definitization Date: June 07, 2010

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
370.0	N/A	0	3206.7	N/A	4	3266.3	3341.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional scope. The Initial Contract Price Target included HEO 3 and GEO 3 long lead effort ($370.0M). Since then the Program Office exercised the HEO 3 and 4 and GEO 3 and 4 production efforts, HEO 3 ground modification effort, Launch Vehicle Integration, launch and Early On-Orbit Support and various special studies, all on separate contract line items. The increased quantity from zero to four is due to the contract award of the HEO 3-4 and GEO 3-4 production efforts.

The contractor Estimated Price at Completion of $3,266.3M, as compared to the December 2014 SAR, is primarily due to additional scope added for the GEO 3-4 Initial Launch Capability (ILC) Modification and the GEO-3 six-month storage extension. The Government's Estimated Price at Completion is $3,341.3M, derived from the 2015 Single Best Estimate, which assumes GEO-3 entering storage in July 2015 and GEO-4 Ready to Ship in February 2016. The HEO-3 Payload was delivered in June 2013 and the HEO-4 Payload was delivered May 2015.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2016)	-21.5	-13.8
Previous Cumulative Variances	-7.1	-65.4
Net Change	-14.4	+51.6

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to incorporating the ILC modification into the contract baseline.

The favorable net change in the schedule variance is due to baselining and realigning of the GEO 3 4 ILC work scope that was awarded in April 2015.

Notes

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: Procurement
Contract Name: SBIRS GEO 5-6 Advance Procurement/Production
Contractor: Lockheed Martin Corporation
Contractor Location: Sunnyvale, CA 94089
Contract Number: FA8810-13-C-0001
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: February 19, 2013
Definitization Date: February 19, 2013

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
284.4	N/A	0	1955.2	1967.6	2	1950.8	1955.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to added scope. The initial contract price included the GEO 5-6 Advance Procurement (AP) effort on February 19, 2013. The Program Office added an Engineering Change Proposal (ECP) on September 19, 2013. The Production portion of the contract was awarded on June 24, 2014. The entire GEO 5-6 Contract consists of AP (plus the ECP) and Production efforts. This is a Fixed Price Incentive Fee contract with a Contractor Target Price of $1,955.2M. The increase of $7.6M from the last SAR is due to the award of the GEO 5-6 Tech Refresh contract modification.

There is no contract quantity associated with the AP portion of this contract. The change in quantity reflects the award of the GEO 5-6 Production effort. The Contractor Estimated Price at Completion is $1,950.8M, which represents the initial AP (plus ECP) & Production award. The Government Estimated Price at Completion is $1,955.2M.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2016)	+24.5	+29.7
Previous Cumulative Variances	+17.4	+35.3
Net Change	+7.1	-5.6

Cost and Schedule Variance Explanations

The favorable net change in the cost variance is due to efficiencies with Northrop Grumman payload supplies and level of effort underruns in management.

The unfavorable net change in the schedule variance is due to a Single Point Adjustment (SPA) implemented August 30, 2015, which reduced the majority of the prime contractor's positive variance. This SPA corresponded to the technical and schedule re-baselining for Tech Refresh.

Contract Identification

Appropriation: Acq O&M
Contract Name: SBIRS CLS-CTF
Contractor: Lockheed Martin Corporation
Contractor Location: Sunnyvale, CA 94089
Contract Number: FA8810-13-C-0002
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: March 15, 2013
Definitization Date: March 15, 2013

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
105.9	N/A	N/A	746.1	N/A	N/A	737.4	746.1

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to added scope. The Contractor Logistics Support and Combined Task Force (CLS/CTF) contract was awarded in March 2013 with a negotiated contract cost of $95.7M. The SBIRS Survivable Endurable Evolution (S2E2) ground mobiles added in July 2013 increased the negotiated cost by $67M. An additional FY 2014 CLS effort was awarded in September 2013 for $105M. In September 2014, the following were awarded: FY 2015 option for $84.6M, FY 2015 Factory Support for $39.5M, Sustainment Support Studies and System Modification for $37.1M, Environmental Control Unit (ECU) Request for Equitable Adjustment (REA) for $1.3M and High Altitude Electromagnetic Pulse hatch door REA for $68K. S2E2 Increment 2 was awarded in November 2014 for $56M, bringing the total negotiated cost to $486.9M. The following contract changes also occurred: June 2015, Interim Mission Control Station Backup de-scope for $1.1M; Block 10 support studies for $737K awarded in July 2015 and FY 2016 Operations crew and Organic Depot Maintenance option exercised for $73.9M in September 2015. October 2015 awards included: FY 2016 Factory support for $42.1M, FY 2015 Sustainment studies and System modification for $37.6M, and CTF Monotrack extension for $39.8M. The total negotiated cost plus target fees equal to the total contractor Target price of $746.1M as of January 31, 2016.

The Contractor Estimated Price at Completion is $737.4M, which represents the initial CLS/CTF portion and its FY 2014 and FY 2015 options, S2E2 Mobile Ground Terminal (SMGT) 1-4, Track Data Relay, GEO capability upgrade, System Test Environment, and Mission Specific Vendor Plug-ins. The Government Estimated Price at Completion is $746.1M.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2016)	+27.2	-5.1
Previous Cumulative Variances	+12.2	-3.3
Net Change	+15.0	-1.8

Cost and Schedule Variance Explanations

The favorable net change in the cost variance is due to level of effort underruns for sustainment efforts.

The unfavorable net change in the schedule variance is due to late sub-contractor contract award, material delay due to delay in SMGT shelters delivery, and sub-contractor late delivery of Heat Exchanger and ECU.

Notes

The contract consists of CLS (APPN 3400), CTF (APPN 3600), and S2E2 Blocks 1 & 2 (APPN 3080).

Although this contract is designated Acq O&M (APPN 3400) the bulk of the funds are non-Acq O&M APPN 3400 funds. This contract also includes some Procurement and RDT&E funding, but the predominance of non-Acq O&M funding supports a key milestone in the IOC of the SBIRS program and therefore, this contract is included in the SAR.

Deliveries and Expenditures

Baseline (GEO 1-4, HEO 1-2, and Ground)

Deliveries				
Delivered to Date	**Planned to Date**	**Actual to Date**	**Total Quantity**	**Percent Delivered**
Development	2	2	2	100.00%
Production	1	1	2	50.00%
Total Program Quantity Delivered	3	3	4	75.00%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	13665.9	Years Appropriated	22
Expended to Date	12761.6	Percent Years Appropriated	81.48%
Percent Expended	93.38%	Appropriated to Date	13298.7
Total Funding Years	27	Percent Appropriated	97.31%

The above data is current as of February 09, 2016.

Block Buy (GEO 5-6)

Deliveries				
Delivered to Date	**Planned to Date**	**Actual to Date**	**Total Quantity**	**Percent Delivered**
Development	0	0	0	--
Production	0	0	2	0.00%
Total Program Quantity Delivered	0	0	2	0.00%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	3328.2	Years Appropriated	6
Expended to Date	404.9	Percent Years Appropriated	54.55%
Percent Expended	12.17%	Appropriated to Date	1914.0
Total Funding Years	11	Percent Appropriated	57.51%

The above data is current as of February 09, 2016.

Operating and Support Cost

Baseline (GEO 1-4, HEO 1-2, and Ground)

Cost Estimate Details

Date of Estimate:	October 01, 2014
Source of Estimate:	POE
Quantity to Sustain:	1
Unit of Measure:	Integrated System
Service Life per Unit:	35.00 Years
Fiscal Years in Service:	FY 1999 - FY 2033

O&M funds support the activation of the SBIRS High System, including Component ground operating and training facilities at worldwide sites. The SBIRS Increment 1 ground system was operational in December 2001. These funds purchase temporary facilities, minor construction, office equipment, furniture, travel, supplies, and communication links necessary for the activation of the SBIRS Mission Control Station, the Mission Control Station Backup, Outside Continental United States Relay Ground Stations, Initial Qualification Training facility, and repair and transportation of Government Furnished Equipment and Temporary Duty costs for training of the initial cadre of operators. Also included in this estimate are all manpower and indirect costs required to operate and sustain the SBIRS system.

The Quantity to Sustain of one Integrated System encompasses the four GEO satellites, two HEO payloads and the associated ground infrastructure. The mission and the sustainment costs cannot be assigned to individual satellites. There are two different satellites and one sensor (three constellations) supported by the same Level I and II maintenance/operations and on-orbit sustainment costs. All pieces together are required to meet the mission.

Ground Rules and Assumptions: 35 years service life start date (1999) is based upon increment 1 entry into Development Test/Operational Test and end date (2033) is based upon final GEO 6 satellite and 12 year service life for SBIRS system.

Sustainment Strategy

The current SBIRS sustainment strategy is Contractor Logistics Support (CLS) under one contract with a balanced fee structure of performance and cost incentives with limited organic depot partnership.

The SBIRS High Baseline subprogram profile reflects the first 30 years of the 35 year SBIRS High Life Cycle Cost, from 1999-2028. The average annual costs are based on the entire 35 year life cycle.

Antecedent Information

Comparable O&S cost estimates for the legacy system, Defense Support Program, are not available.

Annual O&S Costs BY1995 $M		
Cost Element	**Baseline (GEO 1-4, HEO 1-2, And Ground) Average Annual Cost Per Integrated System**	**Defense Support Program (Antecedent) N/A**
Unit-Level Manpower	64.200	0.000
Unit Operations	2.900	0.000
Maintenance	34.200	0.000
Sustaining Support	37.900	0.000
Continuing System Improvements	6.400	0.000
Indirect Support	4.400	0.000
Other	0.000	0.000
Total	150.000	--

Unitized costs reflect the Average Annual O&S cost for the SBIRS High system.

Item	Total O&S Cost $M			
	Baseline (GEO 1-4, HEO 1-2, And Ground)			Defense Support Program (Antecedent)
	Current Development APB Objective/Threshold		Current Estimate	
Base Year	4203.4	4623.7	4390.2	N/A
Then Year	6404.5	N/A	6764.5	N/A

Equation to Translate Annual Cost to Total Cost

Average annual O&S cost of SBIRS High System = (Total O&S cost of SBIRS High Baseline + Total O&S cost of SBIRS High Block Buy)/service life of system = ($4390.2M + $861.8M) / 35Yrs = $150.06M ($0.06M delta from Unitized cost total due to rounding).

O&S Cost Variance		
Category	**BY 1995 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Dec 2014 SAR	4390.2	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	4390.2	

No change from previous year

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 1995 $M):

Disposal costs have not been estimated at this time.

Block Buy (GEO 5-6)

Cost Estimate Details

Date of Estimate:	October 01, 2014
Source of Estimate:	POE
Quantity to Sustain:	1
Unit of Measure:	Integrated System
Service Life per Unit:	35.00 Years
Fiscal Years in Service:	FY 1999 - FY 2033

O&M funds support the activation of the SBIRS High System, including Component ground operating and training facilities at worldwide sites. The SBIRS Increment 1 ground system was operational in December 2001. These funds purchase temporary facilities, minor construction, office equipment, furniture, travel, supplies, and communication links necessary for the activation of the SBIRS Mission Control Station, the Mission Control Station Backup, Outside Continental United States Relay Ground Stations, Initial Qualification Training facility, and repair and transportation of Government Furnished Equipment and Temporary Duty costs for training of the initial cadre of operators. Also included in this estimate are all manpower and indirect costs required to operate and sustain the SBIRS system.

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Ground Rules and Assumptions: 35 years service life start date (1999) is based upon increment 1 entry into Development Test/Operational Test and end date (2033) is based upon final GEO 6 satellite and 12 year service life for SBIRS system.

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The current SBIRS sustainment strategy is Contractor Logistics Support (CLS) under one contract with a balanced fee structure of performance and cost incentives with limited organic depot partnership.

The SBIRS High Baseline subprogram profile reflects the first 30 years of the 35 year SBIRS High Life Cycle Cost, from 1999-2028. The average annual costs are based on the entire 35 year life cycle.

Antecedent Information

Comparable O&S cost estimates for the legacy system, Defense Support Program, are not available.

Annual O&S Costs BY1995 $M		
Cost Element	**Block Buy (GEO 5-6) Average Annual Cost Per Integrated System**	**Defense Support Program (Antecedent) N/A**
Unit-Level Manpower	64.200	0.000
Unit Operations	2.900	0.000
Maintenance	34.200	0.000
Sustaining Support	37.900	0.000
Continuing System Improvements	6.400	0.000
Indirect Support	4.400	0.000
Other	0.000	0.000
Total	150.000	--

Unitized costs reflect the Average Annual O&S cost for the SBIRS High system.

Item	Total O&S Cost $M			
	Block Buy (GEO 5-6)			Defense Support Program (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	795.3	874.8	861.8	N/A
Then Year	1551.1	N/A	1748.2	N/A

Equation to Translate Annual Cost to Total Cost

Average annual O&S cost of SBIRS High System = (Total O&S cost of SBIRS High Baseline + Total O&S cost of SBIRS High Block Buy)/service life of system = ($4390.2M + $861.8M) / 35Yrs = $150.06M ($0.06M delta from Unitized cost total due to rounding).

O&S Cost Variance		
Category	**BY 1995 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Dec 2014 SAR	861.8	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	861.8	

No change from previous year.

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 1995 $M):

Disposal costs have not been estimated at this time.